

```
1  #include "Enemy.h"
2  #include <iostream>
3  #include <Windows.h>
4
5  Enemy::Enemy(int x, int y, int deltaX, int deltaY)
6      : PlaceableActor(x, y, kGreenColour) // placing initial coordinates of enemy
7      , m_currentMovementX(0)
8      , m_currentMovementY(0)
9      , m_directionX(0)
10     , m_directionY(0)
11     , m_movementInX(deltaX) // The maximum distance the enemy can move in the x-direction
12     , m_movementinY(deltaY) // The maximum distance the enemy can move in the y-direction
13 {
14     if (m_movementInX != 0)
15     {
16         m_directionX = 1;
17     }
18     if (m_movementinY != 0)
19     {
20         m_directionY = 1;
21     }
22 }
23
24 void Enemy::Draw()
25 {
26     HANDLE console = GetStdHandle(STD_OUTPUT_HANDLE);
27     SetConsoleTextAttribute(console, m_colour);
28     std::cout << (char)153; // prints coloured enemy.
29     SetConsoleTextAttribute(console, kRegularColour);
30 }
31
32 void Enemy::Update() // update the state of the enemy
33 {
34     if (m_movementInX != 0)
35     {
36         updateDirection(m_currentMovementX, m_directionX, m_movementInX);
37     }
38     if (m_movementinY != 0)
39     {
40         updateDirection(m_currentMovementY, m_directionY, m_movementinY);
41     }
42
43     this->SetXYPosition(m_pPosition->x + m_directionX, m_pPosition->y + m_directionY);
44 }
45
46 void Enemy::updateDirection(int& current, int& direction, int& movement) // responsible for handling the movement of the enemy
47 {
48     current += direction;
```

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49     if (std::abs(current) > movement) // reverse movement. if we reach the  ↗
        end we want to loop back the other way.
50     {
51         current = movement * direction;
52         direction *= -1; // change direction
53     }
54 }
55
56 // If the absolute value of the current movement becomes greater than the  ↗
    maximum allowed movement (movement), it means the enemy has reached the end  ↗
    of its allowed movement range
```